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## United States Patent [19]

DiPoto et al.

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## [54] SUTURE ANCHOR AND DRIVE ASSEMBLY

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## Related U.S. Application Data

[60] Continuation of Ser. No. 91,092, Jul. 12, 1993, abandoned, which is a division of Ser. No. 836,679, Feb. 14, 1992, Pat. No. 5,258,016, which is a continuation-in-part of Ser. No. 681,042, Apr. 5, 1991, abandoned, which is a continuation-in-part of Ser. No. 552,440, Jul. 13, 1990, Pat. No. 5,100,417.

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[52] U.S. Cl. 606/232; 606/72; 606/73

[58] Field of Search 606/65, 73, 86, 606/104, 139, 170, 220, 232

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## [57] ABSTRACT

A suture anchor and anchor driver device for securely and accurately positioning and installing the suture anchor in place. The anchor has a rounded or pointed head and one or more ridges around it to help force fit the anchor into a hole and to hold it in place. A suture is positioned through the anchor for subsequent use during the surgical procedure. The driver device has a handle and an elongated shaft and is used to position and install the anchor in place. The anchor preferably snap fits onto the end of the shaft. A depth guide can be integrally or removably positioned on the shaft to ensure correct depth of placement. Alternately, the driver shaft is hollow and the anchor is positioned inside it and is implanted with a pusher member. The ends of the suture are affixed to the driver handle. Grooves can be provided on the driver and the anchor to prevent the suture from interfering with the positioning and installation procedure.

18 Claims, 9 Drawing Sheets

